

Abstract

Charles University

Faculty of Pharmacy in Hradec Králové

Department of Pharmacology & Toxicology

Student: Katarína Tripská

Supervisor: prof. PharmDr. Petr Pávek, Ph.D.

Title of diploma thesis: **miRNAs as diagnostic markers after treatment with glucocorticoids in rheumatology**

MicroRNAs are important class of non-coding RNAs that play important role in modulation of expression of multiple genes at a post-transcriptional level. Their deregulation contributes to many immune disorders including rheumatoid arthritis, systemic lupus erythematosus and systemic sclerosis.

This thesis represents the most recent knowledge about functions of microRNAs in pathogenesis of these disorders and results were obtained by review of scientific literature published on PubMed database.

The most perspective microRNAs in rheumatoid arthritis seem to be miR-16, miR-21, miR-146a, miR-150 a miR-223. In lupus miR-148, miR-126, miR-21, miR-155, miR-125a a miR-146 will probably find their useage as biomarkers. Systemic sclerosis is less examined diseases and we know most about miR-29 in the disease.

Since the research of microRNA as diagnostic biomarkers is only at the beginning, it is most likely, that with the time there will be more and more of new microRNAs helping us clarify pathogenesis of each disorder. We can suppose that these microRNAs will become common method of diagnostic and maybe later will even find their place at everyday clinical practice.